

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018790**Date Inspected:** 03-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Bao Qian

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Li, stencil 044772 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make repairs of OBG segment 13CE vertical plate stiffener weld VP3008-001-048 in accordance with weld repair document B-WR-17998. This weld had been ultrasonically rejected and ZPMC QC has documented that the depth of the repair was 10mm. This QA Inspector observed a welding current of approximately 240 amps and a travel speed of approximately 100mm per minute. This QA Inspector observed the base materials had been heated with electric heaters to preheat the base material temperature of this weld joint. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007L-013. ZPMC QC Mr. Zhong Guo Hui presented this QA Inspector with weld

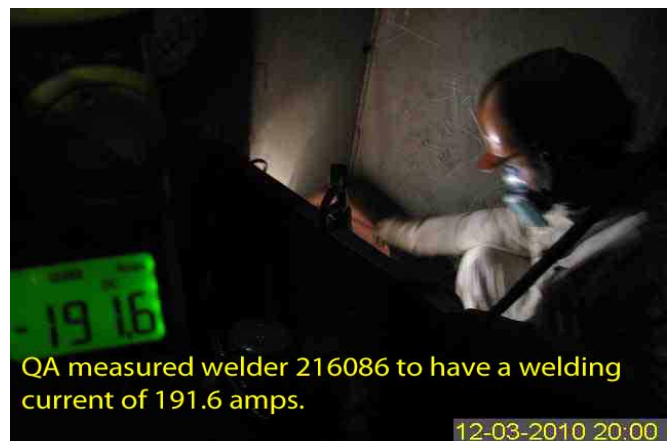
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repair document B-WR-17548 that documents depth of this repair was 8mm. This QA Inspector observed a welding current of approximately 178 amps and a travel speed of 120mm per minute. This QA Inspector observed that the maximum welding current listed in the welding procedure specification is 160 amps and that Mr. Yang Yunfeng has a welding current that was approximately 18 amps above this maximum limit. This QA Inspector showed ABF CWI Mr. Bao Qian the welding procedure specification and he agreed the welding current was too high. Mr. Bao Qian had ZPMC welder Mr. Yang Yunfeng adjust this welding machine to a welding current of approximately 160 amps. This QA Inspector observed Mr. Yang Yunfeng appeared to be certified to make this weld. Following adjustment of the welding machine current, items observed on this date appeared to generally comply with applicable contract documents. See the photographs below for additional information.

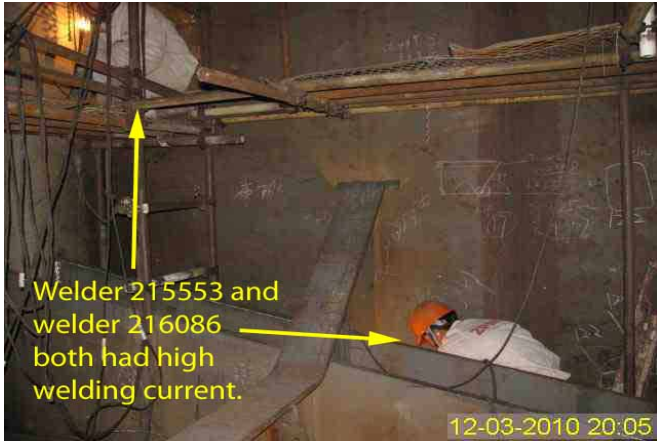
This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007U-103. ZPMC QC Mr. Zhong Guo Hui presented this QA Inspector with weld repair document B-WR-17727 that documents depth of this repair was 7mm. This QA Inspector observed a welding current of approximately 192 amps and a travel speed of approximately 160mm per minute. This QA Inspector observed that the maximum welding current listed in the welding procedure specification is 180 amps and that Mr. Yang Yunfeng has a welding current that was approximately 12 amps above this maximum limit. This QA Inspector showed ABF CWI Mr. Bao Qian the welding procedure specification and he agreed the welding current was too high. Mr. Bao Qian had ZPMC welder Mr. Wang Zhengbin adjust this welding machine to a welding current of approximately 175 amps. This QA Inspector observed Mr. Wang Zhengbin appeared to be certified to make this weld. Following adjustment of the welding machine current, items observed on this date appeared to generally comply with applicable contract documents. See the photographs below for additional information.

CWI Inspector Mr. Bao Qian informed this QA Inspector that there is no CO₂/Argon shielding gas available and that is the reason that there is no FCAW welding taking place in bay 14 this shift.



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Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

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| Inspected By: | Dawson,Paul | Quality Assurance Inspector |
| Reviewed By: | Carreon,Albert | QA Reviewer |
